DETAILED ACTION

Claim Status

1. Claims 1-32 are pending.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for an examiner's amendment was given in a telephone interview with Mr. Shawn Doman (reg. 60362) on June 16, 2010.

4. **In the claims:**

Claims 1, 3, 4, 5, 13, 15-19, 23, 25, and 28 have been amended. Please replace all prior claims with the claims below.

1. (Currently Amended) A method comprising:

determining a speculative structure of a database,

wherein said determining said speculative structure of said database comprises selecting, by a computer, said speculative structure of said database from among a plurality of predefined database structures,

said database comprises the a plurality of components,

said database is stored on a storage volume,

said speculative structure of said database comprises a speculative arrangement of database components,

said speculative arrangement is intended to match an actual structure of said database, and

said actual structure of said database is unknown when said determining said speculative structure of said database is performed;

detecting whether said speculative structure of said database matches said actual structure of said database,

wherein said detecting whether said speculative structure of said database matches said actual structure of said database comprises comparing restored data with original data,

said restored data comprises data from a backup copy of said original data, and

said backup copy was formed using said speculative structure of said database;

identifying each of said plurality of components of said database using said speculative structure of said database;

selecting a component of said plurality of components of said database;

selecting a data management resource of a plurality of data management resources using an attribute of said component of said plurality of components of said database; and

generating a point-in-time image of said component of said plurality of components of said database using said selected data management resource of a plurality of data management resources.

2. (Previously Presented) The method of claim 1, further comprising:

performing one or more operations to determine if said speculative structure of said database is equivalent to an actual structure of said database.

3. (currently amended) The method of claim 1, wherein said selecting a component of said plurality of components of said database comprises:

selecting said component of said plurality of components of said database to include within a point-in-time image of said database.

4. (currently amended) The method of claim 1, wherein said selecting a component of said plurality of components of said database comprises:

selecting at least one of a database directory, a table space container, and a redo
log directory.

5. (currently amended) The method of claim 1, wherein said selecting a data management resource of a plurality of data management resources comprises: selecting said data management resource using said attribute of said component of said plurality of components of said database and a user-defined policy.

6. (Previously Presented) The method of claim 1, wherein said selecting a data management resource of a plurality of data management resources comprises:

selecting said data management resource using at least one of a size attribute, a type attribute, a structure attribute, and a location attribute.

7. (Original) The method of claim 6, wherein said selecting said data management resource of a plurality of data management resources further comprises:

defining a component size range; and selecting said data management resource in response to a determination that said size attribute is within said component size range.

8. (Previously Presented) The method of claim 1, wherein said selecting a data management resource of a plurality of data management resources comprises: selecting a point-in-time image creation process.

9. (Original) The method of claim 8, wherein said point-in-time image creation process comprises at least one of: a file-level point-in-time image creation process, a directory-

level point-in-time image creation process, a file system-level point-in-time image creation process, a storage device-level point-in-time image creation process, a volume-level point-in-time image creation process, and a volume group-level point-in- time image creation process.

10. (Original) The method of claim 8, wherein said selecting a point-in-time image creation process comprises:

selecting at least one of: a snapshot creation process, a storage checkpoint creation process, and a file copy command, and a backup utility process.

11. (Original) The method of claim 2, further comprising:

restoring said database using said point-in-time image of said component.

12. (Original) The method of claim 11, wherein, said database is initially stored within a first storage region, and said restoring comprises, restoring said database to a second storage region.

13. (Currently Amended) An apparatus comprising:

means for determining a speculative structure of a database,

wherein said means for determining said speculative structure of said database comprises

means for selecting said speculative structure of said database from among a plurality of predefined database structures,

said database comprises the a plurality of components,

said speculative structure of said database comprises a speculative arrangement of database components, and

said speculative arrangement is intended to match an actual structure of said database,

[[an]]said actual structure of said database is unknown when said determining said speculative structure of said database is performed;

means for detecting whether said speculative structure of said database matches said actual structure of said database,

wherein said means for detecting whether said speculative structure of said database matches said actual structure of said database comprises comparing restored data with original data,

said restored data comprises data from a backup copy of said original

data, and

said backup copy was formed using said speculative structure of said

database;

means for identifying each of said plurality of components of said database using said speculative structure of said database;

means for associating a data management resource with a component of said plurality of components of said database;

means for generating a point-in-time image of said component of said plurality of components of said database using said associated data management resource; and

a hardware storage means for storing said database.

14. (Previously Presented) The apparatus of claim 13, further comprising: means for performing one or more operations to determine if said speculative structure of said database is equivalent to an actual structure of said database.

15. (currently amended) The apparatus of claim 13, wherein said means for associating a data management resource with a component of said plurality of components of said database comprises: means for associating a point-in-time image creation process with said component
of said plurality of components.

16. (currently amended) The apparatus of claim 13, wherein said means for associating a data management resource with a component of said plurality of components of said database comprises:

means for associating said associating data management resource with said component of said plurality of components of said database using an attribute of said component.

17. (currently amended) The apparatus of claim 16, wherein said means for associating a data management resource with a component of said plurality of components of said database further comprises:

means for associating said associating data management resource with said component of said plurality of components of said database using a user-defined policy.

18. (currently amended) The apparatus of claim 16, wherein said means for associating said data management resource with said component of said plurality of components of said database using an attribute of said component comprises:

means for associating said data management resource with said component of said plurality of components of said database using at least one of a size attribute, a type attribute, a structure attribute, and a location attribute.

19. (currently amended) The apparatus of claim 18, wherein said means for associating said data management resource with said component of said plurality of components of said database using an attribute of said component further comprises:

means for defining a component size range; and

means for associating said data management resource with said component of said plurality of components of said database in response to a determination that said size attribute is within said component size range.

20. (Previously Presented) The apparatus of claim 13, wherein said means for generating comprises:

means for generating a point-in-time image of said database.

21. (Previously Presented) The apparatus of claim 13, further comprising: means for restoring said database using said point-in-time image of said component.

22. (Original) The apparatus of claim 21, wherein, said database is initially stored within a first storage region, and said means for restoring comprises, means for restoring said database to a second storage region.

23. (Currently Amended) A program product comprising:

a non-transitory machine-readable storage medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed cause said machine to:

determine a speculative structure of a database,

wherein said speculative structure of said database is selected from among a plurality of predefined database structures,

said database comprises a plurality of components,

said speculative structure of said database comprises a speculative arrangement of database components,

said speculative arrangement is intended to match an actual structure of said database,

[[an]]said actual structure of said database is unknown when said determining a speculative structure of a database is performed, and

said database is stored on a storage volume;

detect whether said speculative structure of said database matches said actual structure of said database,

wherein detecting comprises comparing restored data with original data,

said restored data comprises data from a backup copy of said original

data, and

said backup copy was formed using said speculative structure of said

database;

identify each of said plurality of components of said database using said speculative structure of said database;

select a component of said plurality of components of said database;

select a data management resource of a plurality of data management resources using an attribute of said component of said plurality of components of said database; and

generate a point-in-time image of said component of said plurality of components of said database using said selected data management resource of the plurality of data management resources.

24. (Previously Presented) The program product of claim 23, further comprising:

performing one or more operations to determine if said speculative structure of said database is equivalent to an actual structure of said database.

25. (Currently Amended) The program product of claim 23, wherein selecting a component of said plurality of components of said database comprises:

selecting said component of said plurality of components to include within a point-in-time image of said database.

26. (Previously Presented) The program product of claim 23, wherein selecting a data management resource of a plurality of data management resources comprises:

selecting said data management resource using said attribute of said component and a user-defined policy.

27. (Previously Presented) The program product of claim 23, wherein selecting a data management resource of a plurality of data management resources comprises:

selecting a point-in-time image creation process.

28. (Currently Amended) A system comprising:

a first non-transitory computer-readable storage medium configured to store a database;

a point-in-time image utility configured to,

access said a first storage element;

determine a speculative structure of said database, wherein said determining said speculative structure of said database comprises

selecting said speculative structure of said database from among a plurality of predefined database structures,

said database comprises plurality of components,

said speculative structure of said database comprises a speculative arrangement of database components, and

said speculative arrangement is intended to match an actual structure of said database,

[[an]]said actual structure of said database is unknown when said determining said speculative structure of said database is performed;

detect whether said speculative structure of said database matches said actual structure of said database

wherein detecting whether said speculative structure of said database matches said actual structure of said database comprises comparing restored data with original data,

said restored data comprises data from a backup copy of said original data; and

said backup copy was formed using said speculative structure of said database;

identify each of said plurality of components of said database using said speculative structure of said database;

select a component of said plurality of components of said database;

select a data management resource of a plurality of data management resources using an attribute of said component of said plurality of components of said database; and

generate a point-in-time image of said component of said plurality of components of said database using said selected data management resource of a plurality of data management resources.

29. (Original) The system of claim 28, wherein said point-in-time image utility comprises:

a memory to store said point-in-time image utility; and

a processor coupled to said memory to execute said point-in-time image utility.

30. (Original) The system of claim 28, further comprising a first node, wherein said first node comprises said first storage element and said point-in-time image utility.

31. (Original) The system of clam 30, further comprising a second node communicatively coupled to said first node, wherein said second node comprises a second storage element to store said point-in-time image of said component.

32. (Previously Presented) The system of Claim 28, wherein said point-in-time image utility configured to discover a plurality of components is further configured to:

perform one or more operations to verify if said speculative structure of said database is equivalent to an actual structure of said database.

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

Allowable Subject Matter

5. Claims 1-32 are allowed.

6.. The following is a statement of reasons for the indication of allowable subject matter.

With respect to independent claim 1, the prior art of record, single or in combination, does not teach or fairly suggest the step of:

> "wherein said determining said speculative structure of said database comprises selecting, by a computer, said speculative structure of said database from among a plurality of predefined database structures, said database comprises the a plurality of components, said database is stored on a storage volume, said speculative structure of said database comprises a speculative arrangement of database components, said speculative arrangement is intended to match an actual structure of said database, and said actual structure of said database is unknown when said determining said speculative structure of said database is performed; detecting whether said speculative structure of said database matches said actual structure of said database, wherein said detecting whether said speculative structure of said database matches said actual structure of said database comprises comparing restored data with original data, said restored data comprises data from a backup copy of said original data, and said backup copy was formed using said speculative structure of said database", in combination with the other claimed limitations.

Claims 13, 23, and 28 recite similar limitations and are therefore allowed. Dependent claims are allowed for being dependent to an allowed claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PHAM whose telephone number is (571)272-3924. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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